

forming a first layer of a base metal, a semiconducting material or as a combination of a base metal and a semiconducting material on a substrate,

depositing a second layer of a conducting polymer on the first layer, said conducting polymer being selected among conducting polymers with a work function greater than the work function of the first layer, such that the real work function of the electrode structure in any case becomes equal to the work function of the selected conducting polymer, and providing the electrode structure in the semiconducting device such that the second layer contacts at least a portion of an active organic semiconductor material in said semiconducting device,

modifying the work function of the conducting and/or semiconducting material of the first layer by depositing a second layer of a conducting polymer with a work function higher than that of the material in the first layer such that the layer of the conducting polymer mainly covers the first layer or is conformal with the latter, whereby the combination of the first layer and second layer constitutes the anode of the electrode arrangement and the work function of the anode becomes substantially equal to that of the conducting polymer,

depositing a third layer of semiconducting organic material on top of the anode and if only a portion of the

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substrate is covered by the anode, optionally also depositing the third layer on top of at least some of the portion of the substrate not covered by the anode, and

depositing a patterned or non-patterned fourth layer of a metal on the top of the third layer, whereby the fourth layer constitutes the cathode of the electrode arrangement.
